

What is claimed is:

1. An apparatus for introducing a composition into at least one cell in a vessel in a subject comprising:

a catheter having at least one inflatable balloon portion;

at least one infusion passage for introducing the composition into the subject;

a first electrode positioned adjacent to at least one infusion passage;

a second electrode positioned with respect to the first electrode and the subject such that an electric field sufficient to cause electroporation of at least one cell in the vessel is generated, thereby allowing the composition to enter at least one cell after introduction of the composition through at least one infusion passage.

2. The apparatus of claim 1, further comprising an electrical source connected to the first and second electrodes for applying a voltage between the electrodes in an amount sufficient to cause electroporation of at least one cell.

3. The apparatus of claim 1, wherein the vessel is a blood vessel.

4. The apparatus of claim 1, wherein the first electrode is formed at least in part by a biologically inert material.

5. The apparatus of claim 1, wherein the second electrode is a guidewire in the catheter.

6. The apparatus of claim 1, wherein the second electrode is a silver plate configured to be placed in contact with the subject.